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09/504,893	02/16/2000	Seong-jin Moon	1293.1094/MDS	5544

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EXAMINER	
LAO, LUN S	

ART UNIT	PAPER NUMBER
2643	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/504,893	MOON ET AL.	
	Examiner	Art Unit	
	Lun-See Lao	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This action is response to filed on 02-16-2000. Claims 1-12 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The driven "searching among the sub-audio data streams of the another program for whether there is a sub-audio data stream having a channel ID which has a higher precedence than the precedence of the channel ID assigned to the sub-audio data stream of the program which was reproduced before the program was changed; and when the sub-audio data stream having the channel ID which has the higher precedence than the precedence of the channel ID assigned to the sub-audio data stream of the program which was reproduced before the program was changed exists in the another program, selecting, from the sub-audio data streams of the another program, the sub-audio data stream having the channel ID which has the higher precedence than the precedence of the channel ID assigned to the sub-audio data

stream of the program which was reproduced before the program was changed" (see specification page 6 line 4-8 and pages 8-9and figs. 1—6) was not supported in the further detail in the specification nor in any of the claim..

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,694,091

and claims 1-12 of US Patent No. 6,813,281. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Consider claim 1 substantially all the claimed steps were claimed in the patent identified above, such as the steps of : " a method of selecting audio channels of an A/V data stream comprising a plurality of programs, each program comprising at least two kinds of audio data streams, each audio data stream comprising at least two sub-audio data streams which are not repeated and have a series of channel IDs according to a predetermined order of precedence, the method comprising:

(a) when one of the programs is changed to another one of the programs, searching whether there is a sub-audio data stream having a channel ID which is the same as the channel ID assigned to the sub-audio data stream of the program which was being reproduced before the program was changed, in the another program; and

(b) when it is determined that there is the sub-audio data stream having a channel ID which is the same as the channel ID assigned to the sub-audio data stream of the program which was being reproduced before the program was changed in the step (a), selecting the sub-audio data stream having the same channel ID of the another program" (see US PAT. 6,694,091 claim 1, col.8 line 40-col.9 line 5).

The difference between the current claims and the patent is that the environments wherein the claimed a method of selecting audio channels of A/V data stream comprising a plurality of programs. The current application involve an A/V data stream with two sub-audio data stream and the patent involves an RF AMP to convert optical signal.

However, both the data stream and RF AMP to convert optical signal are involving an operation of A/V device. This optical recording and reproducing apparatus is meant to use as an A/V device. Although the environment (one is hearing aid, the other one is for loudspeaker) is different, but they both involve A/V device. Therefore, using this audio data channel and sub-audio data channel in these two environments would have been obvious for one of ordinary skill in the art because even the environment changes, the operation of the A/V device remains substantially unchanged.

Consider claim 4 substantially all the claimed steps were claimed in the patent identified above, such as the steps of : " a method of selecting audio channels of an A/V data stream comprising a plurality of programs, each program comprising at least two audio data streams, and ones of the audio data streams having dual mono channels, the method comprising:

reproducing one of the dual mono channels of one of the audio data streams of a first one of the programs;

changing to a second one of the programs; and

determining if one of the dual mono channels of one of the audio data streams of the second program corresponds to the one dual mono channel of the one audio data stream of the first program, and reproducing the one dual mono channel of the one audio stream of the second program if the correspondence exists (see US PAT. 6,694,091 claim 7, col. 9 line 52-col.10 line 8).

The difference between the current claims and the patent is that the environments wherein the claimed a method of selecting audio channels of A/V data stream

comprising a plurality of programs. The current application involve an A/V data stream with two sub-audio data stream and the patent involves an RF AMP to convert optical signal.

However, Both the data stream and RF AMP to convert optical signal are involving an operation of A/V device. This optical recording and reproducing apparatus is meant to use as an A/V device. Although the environment (one is hearing aid, the other one is for loudspeaker) is different, but they both involve A/V device. Therefore, using this audio data channel and sub-audio data channel in these two environments would have been obvious for one of ordinary skill in the art because even the environment changes, the operation of the A/V device remains substantially unchanged.

Consider claim 9 substantially all the claimed steps were claimed in the patent identified above, such as the steps of : " a method of selecting audio channels of an A/V data stream comprising a plurality of programs, each program comprising at least two audio data streams with at least one channel, ones of the audio data streams having dual mono channels, wherein each channel has a channel ID according to a predetermined order of precedence within the program, the
method comprising:

when a first one of the programs is changed to a second one of the programs, searching whether there is a second dual mono channel of the second program having a channel ID which is the same as a channel ID assigned to a first dual mono channel of the first program which was being reproduced prior to the change; and selecting the

second dual mono channel if the search is successful (see US PAT. 6,694,091 claim 12 and col. 10 lines 30-48).

The difference between the current claims and the patent is that the environments wherein the claimed a method of selecting audio channels of A/V data stream comprising a plurality of programs. The current application involve an A/V data stream with two sub-audio data stream and the patent involves an RF AMP to convert optical signal.

However, Both the data stream and RF AMP to convert optical signal are involving an operation of A/V device. This optical recording and reproducing apparatus is meant to use as an A/V device. Although the environment (one is hearing aid, the other one is for loudspeaker) is different, but they both involve A/V device. Therefore, using this audio data channel and sub-audio data channel in these two environments would have been obvious for one of ordinary skill in the art because even the environment changes, the operation of the A/V device remains substantially unchanged.

Consider claims 5-8 Moon teaches the method of further comprising:

reproducing one of the audio streams of the second program corresponding to the one audio stream of the first program having the one dual mono channel if the correspondence in the determining step does not exist (see US PAT. 6,694,091, claim 8. and col. 10 lines 8-12); and the method of further comprising:

reproducing one channel of one of the audio streams of the second program having a closest order of status to the one audio stream of the first program having the one dual mono channel if the correspondence in the determining step does not

exist(see US PAT. 6,694,091, claim 9. and col. 10 lines 13-19); and the method of further comprising:

reproducing a default channel of one of the audio streams of the second program if the correspondence in the determining step does not exist (see US PAT. 6,694,091, claim 10. and col. 10 lines 20-23); and the method of further comprising:

reproducing one channel of one of the audio streams of the second program having a higher order of precedence than the one audio stream of the first program having the one dual mono channel if the correspondence in the determining step does not exist (see US PAT. 6,694,091, claim 11. and col. 10 lines 24-29).

Consider claims 10-12, Moon teaches that the method of further comprising: selecting one channel of the second program having a channel selection number with a higher order of precedence than the first dual mono channel if the search is unsuccessful (see US PAT. 6,694,091, claim 13. and col. 10 lines 49-52); and the method of further comprising:

selecting one channel of the second program having a channel selection number closest in correspondence to the first dual mono channel if the search is unsuccessful (see US PAT. 6,694,091, claim 14. and col. 10 lines 53--56); and the method of further comprising:

selecting a default one of the channels of the second program if the search is unsuccessful (see US PAT. 6,694,091, claim 15. and col. 10 lines 57-60).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oguro (EP 0682421) in view of Endoh et al. (US PAT. 6,016,295).

Consider claim 1, Oguro teaches a method of selecting audio channels of an A/V data stream comprising a plurality of programs (eg, many kinds movies), each program (such as a movie) comprising at least two kinds of audio data streams (eg. Japanese and English), each audio data stream comprising at least two sub-audio data streams which are not repeated and have a series of channel IDs according to a predetermined order of precedence, the method comprising (see abstract):

(a) when one of the programs is changed to another one of the programs, searching whether there is a sub-audio data stream having a channel ID which is the same as the channel ID assigned to the sub-audio data stream of the program which was being reproduced before the program was changed, in the another program (see figs. 33-36 and page 14 line 32-page 15 line 50); but Oguro does not clearly teach when it is determined that there is the sub-audio data stream having a channel ID which is the same as the channel ID assigned to the sub-audio data stream of the program which was being reproduced before the program was changed in the step (a), selecting the sub-audio data stream having the same channel ID of the another program.

However, Endoh teaches when it is determined that there is the sub-audio data stream having a channel ID (number of language code see fig.61) which is the same as the channel ID assigned to the sub-audio data stream of the program which was being reproduced before the program was changed in the step (a), selecting the sub-audio data stream having the same channel ID of the another program (the previous audio channel ID can be interpret as the default language code and next program will continue to use the default code if it is the same, otherwise it will change and see figs. 57,59 and col.32 line 42-col.33 line 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teaching of Endoh into Oguro to provide an recording the created first and second code information items, audio data, type information, and management information in a data area on a recording medium.

Consider claim 2, Endoh teaches when there is no sub-audio data stream having a channel ID which is the same as the channel ID assigned to the sub-audio data stream of the program which was being reproduced before being changed, the method in the another program further comprising selecting a sub-audio data stream having a channel selection number which has first precedence in the predetermined order of precedence among the sub-audio data streams of the another program (the previous audio channel ID can be interpret as the default language code and next program will continue to use the default code if it is the same, otherwise it will change, and see figs. 57,59 and col.32 line 42-col.33 line 52).

Consider claim 3 Endoh teaches when there is no sub-audio data stream having a channel ID which is the same as the channel ID assigned to the sub-audio data stream of the program which was being reproduced before being changed, the method further comprising:

searching among the sub-audio data streams of the another program for whether there is a sub-audio data stream having a channel ID which has a higher precedence than the precedence of the channel ID assigned to the sub-audio data stream of the program which was reproduced before the program was changed; and

when the sub-audio data stream having the channel ID which has the higher precedence than the precedence of the channel ID assigned to the sub-audio data stream of the program which was reproduced before the program was changed exists in the another program, selecting, from the sub-audio data streams of the another program, the sub-audio data stream having the channel ID which has the higher precedence than the precedence of the channel ID assigned to the sub-audio data stream of the program which was reproduced before the program was changed

(the previous audio channel ID can be interpret as the default language code and next program will continue to use the default code if it is the same, otherwise it will be change by increasing the search point (n=n+1) and see figs. 57,59 and col.32 line 42-col.33 line 52).

Consider claim 4 Orguro teaches a method of selecting audio channels of an A/V data stream comprising a plurality of programs (different movies) , each program (movie) comprising at least two audio data streams (different languages), and ones of the audio data streams having dual mono channels, the method comprising 9see abstract):

reproducing one of the dual mono channels of one of the audio data streams of a first one of the programs;

changing to a second one of the programs (see figs. 33-36 and page 14 line 32-page 15 line 50); but Oguro does not clearly teach that determining if one of the dual mono channels of one of the audio data streams of the second program corresponds to the one dual mono channel of the one audio data stream of the first program, and reproducing the one dual mono channel of the one audio stream of the second program if the correspondence exists.

However, Endoh teaches that determining if one of the dual mono channels of one of the audio data streams of the second program corresponds to the one dual mono channel of the one audio data stream of the first program, and reproducing the one dual mono channel of the one audio stream of the second program if the correspondence exists (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teaching of Endoh into Oguro to provide an audio system that easily maintains compatibility with a surround sound system when in a special system that transmits surround audio using a plurality of transmission channels which are used for special uses such as karaoke and surround sound.

Consider claims 5-7 Endoh teaches the method of further comprising:

reproducing one of the audio streams of the second program corresponding to the one audio stream of the first program having the one dual mono channel if the correspondence in the determining step does not exist (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59); and reproducing one channel of one of the audio streams of the second program having a closest order (such as x<n and see fig.62 and col.33 line 60-col.34 line45) of status to the one audio stream of the first program having the one dual mono channel if the correspondence in the determining step does not exist(the previous dual mono channel can be interpret as the surround sound mode and next program will continue to use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59) and reproducing a default channel of one of the audio streams of the second program if the correspondence in the determining step does not exist (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to

use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59).

Consider claim 8 Endoh teaches the method of further comprising:

reproducing one channel of one of the audio streams of the second program having a higher order (such as x<n and see fig.62 and col.33 line 60-col.34 line45) of precedence than the one audio stream of the first program having the one dual mono channel if the correspondence in the determining step does not exist (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59).

Consider claim 9 Oguro teaches a method of selecting audio channels of an A/V data stream comprising a plurality of programs (eg. different movies), each program (a movie) comprising at least two audio data streams (different languges, such as Japanese and English) with at least one channel, ones of the audio data streams having dual mono channels, wherein each channel has a channel ID according to a predetermined order of precedence within the program, the method comprising (see figs. 33-36 and page 14 line 32-page 15 line 50); but Oguro does not clearly teach when a first one of the programs is changed to a second one of the programs, searching whether there is a second dual mono channel of the second program having a channel

ID which is the same as a channel ID assigned to a first dual mono channel of the first program which was being reproduced prior to the change; and selecting the second dual mono channel if the search is successful.

However, Endoh teaches when a first one of the programs is changed to a second one of the programs, searching whether there is a second dual mono channel of the second program having a channel ID which is the same as a channel ID assigned to a first dual mono channel of the first program which was being reproduced prior to the change; and selecting the second dual mono channel if the search is successful (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the teaching of Endoh into Oguro to provide an audio system that easily maintains compatibility with a surround sound system when in a special system that transmits surround audio using a plurality of transmission channels which are used for special uses such as karaoke and surround sound.

Consider claims 10-12 Endoh teaches the method of further comprising: selecting one channel of the second program having a channel selection number with a higher order(such as x<n and see fig.62 and col.33 line 60-col.34 line45) of precedence than the first dual mono channel if the search is unsuccessful (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to

use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59), and selecting one channel of the second program having a channel selection number closest(such as x<n and see fig.62 and col.33 line 60-col.34 line45) in correspondence to the first dual mono channel if the search is unsuccessful (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59); and selecting a default one of the channels of the second program if the search is unsuccessful (the previous dual mono channel can be interpret as the surround sound mode and next program will continue to use the surround sound mode if it is the same, otherwise it will be changed bit stream information BSI and see figs. 56,62, and col.35 line 25-col.36 line 59).

Conclusion

8 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hirayama (US PAT. 6,028.979), Yoshio (US PAT. 5,130,816); Yoshinobu et al. (US PAT.5,686,954) and Yasushi (EP 0521487) are recited to show other related the method of assigning audio channel identification, method for selecting audio channel using the same, and optical recording and reproducing apparatus suitable therefor.

9. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao, Lun-See whose telephone number is (703) 305-2259 The examiner can normally be reached on Monday-Friday from 8:00 to 6:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao, Lun-See
Patent Examiner
US Patent and Trademark Office
Crystal Park 2
(703305-2259
CLAIMS

DUC NGUYEN
PRIMARY EXAMINER